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**REMARKS**

The last Office Action dated March 21, 2002 has been carefully considered.

It is noted that Claims 1 was rejected under 35 U.S.C. § 103 as being unpatentable over Germaise et al. (U.S. Pat. No. 5, 678, 295) in view of Okuyama (U.S. Pat. No. 3,125,084). Applicant respectfully seeks to traverse the rejection in that the Examiner has not established a prima facie case of obviousness with respect to claim 1. The examiner must take into account the explicit requirements of the claim to support a prima facie case of obviousness *In Re Fine* 837 F.2d 1071, 5 USPQ2d 1596 (Fed Circ. 1988), *In Re Evanega*, 829 F.2d 1110, 4 USPQ2d 1249 (Fed. Circ. 1987).

The claimed invention is directed to the thermochromic display having claim limitations neither disclosed nor suggested by the references cited by the Examiner. More specifically the combination claimed in Claim 1 is limited to "an integral thermochromatic display **fixedly printed** on the outside wall of a ceramic cup".

Germais et al. deploy electronic sensing means in combination with an *electronic display* device to provide a visual or audible indication of beverage temperature. The device requires batteries, means for activation of switch, and is therefore much more complicated as well as expensive to manufacture. Furthermore, the electronics must be hermetically sealed from water as the vessel is subject to regular washing.

As the thermal display of the instant invention is formed from a printable ink, it can be applied to the outside of a cup or mug without the necessity of providing a liquid containing means as disclosed in Okuyama. Accordingly, it has significant advantages over the prior art methods for sensing and indicating the temperature of the liquid

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contained within a vessel. As none of the cited references disclose a printable thermochromic material that changes from opaque to transparent within a temperature range, there is no motivation within the references to use such a material on the beverage holding cup of the instant invention.

Further, assuming in arguendo, that the examiner has established a prima facie case of obviousness, the references are not properly combinable by their own teachings. The fluid containment vessel disclosed in Okuyama must be molded or fabricated in a manner that provides a means for containing a liquid paraffin, which undergoes a transition from clear to opaque, in the wall of the vessel. Okuyama discloses that a plastic baby bottle is readily molded or post fabricated by thermoforming to have a plurality of wells and different locations on the periphery of the outer wall of the containment vessel. Moreover, the wall thickness of the plastic baby bottle provides for good thermal contact between the liquid beverage and the thermochromic material taught by Okuyama. The multiple cavities taught in Okuyama are not readily fabricated in a ceramic vessel, and such method are disparaged by Germais et al., *infra*, particularly at column 2, line 63.

"fluid trapped in an internal cavity is generally considered problematic in construction of a mug or cup".

Germais et al, while directed to an open mouth drinking vessel possessing a handle further for the consumption of hot beverages, generally teaches away from thermochromic indicating means as having poor visibility (column 3, line 12) and because of the requirement for fabrication of dual wall vessel. Applicant believes, therefore that Germaise et al. teaches away from using a thermochromic material as a thermal sensing and indicating method of the instant invention, and also teaches away from combining any other reference having a disclosure of a thermo-optic material that

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undergoes a transparent to liquid transition, particularly at column 2, line 63

"the means of indicating the relevant temperature of the beverage held relies upon the principle that fluid, gas or liquid, expands with temperature. This provides a crude indication of temperature, as in the case the whistle or color change, and fluid trapped in an internal cavity is generally considered problematic in construction of a mug or cup".

A reference should be considered as a whole, and portions arguing against or teaching away from the claimed invention must be considered. See *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 230 USPQ 416 (Fed. Cir. 1986).

Additionally, applicant believes that Germaise et al. teaches a much more complex invention than the invention of the present application, by focusing on complex embodiments such as that claimed in the Germaise et al. patent. Thus, applicant believes that Germaise et al. teaches away from the simplicity of the present invention, which provides a solution to the problem of highly visible temperature indicia with a minimum of manufacturing steps. See *In re Baird*, 16 F.3d 380, 29 USPQ2d 1550 (Fed. Cir. 1994) (prior art reference "appears to teach away from the selection of" the claimed composition "by focusing on more complex examples"). The fact that a simple solution has escaped other workers in the art is some evidence that it was not obvious to a person of ordinary skill in the art. See *In re Shelby*, 311 F.2d 807, 810, 136 USPQ 220 (CCPA 1963):

Appellant's claimed invention departs from the prior art in the direction of simplicity rather than in the direction of complexity, as the thermochromic display is readily applied to any regular vessel suitable for receiving printing or laminating to its outer surface. The simplicity of this useful invention is, in retrospect, some evidence that it was not obvious to a

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person of ordinary skill in the art. In re Osplack, 39 CCPA 932, 195 F.2d 921, 93 USPQ 306. . . . While it is admittedly simple, it has escaped the other workers in this crowded art. We do not think the simplicity of appellant's construction should deprive him of his right to a patent thereon. Expanded Metal Co. v. Bradford, 214 U.S. 366.

Therefore it is respectfully submitted that Germais et al. is not relevant to the present invention.

Applicant has added new Claims 2 through 8. It is respectfully submitted that the new claims 2-8 are clearly patentably distinguishable over the prior art, since it is believed that the construction defined in these claims differs essentially and in an unobvious, highly advantageous manner from the constructions disclosed in the references. New claim 2 claims a fluid containment vessel having printed indicia, which is not disclosed in any of the cited patents. Applicant is aware of prior uses of thermochromic ink on beverage containers that change from opaque to transparent to reveal decorative and non-functional features. In claim 2 the temperature indicating mark is concealed by the overlaying by the thermochromic ink until it becomes transparent. This limitation has inherent support in the specification in that the preferred material for forming the thermochromic display is described as being applied as a thermochromic printed overlay in the 2<sup>nd</sup> paragraph of the Detailed Description.

New claim 3 -8 are dependent from claim 2, and hence should be allowable over the prior art of record. The additional limitations in claims 2-8 find support in the specification, drawings and are also found in claim 1.

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Applicant believes that combining the references discussed above would not lead to the claimed invention, in that the present invention does not merely employ the known substitution of equivalents but rather employs a new, non-obvious combination to accomplish the objectives set out in the present application.

As for the proposed combination of references cited by the examiner, it is respectfully submitted that since none of the references in the combination teaches the distinctive features of applicant's invention as defined now in the new claims 2 through 8, any hypothetical construction produced by this combination would not lead to applicant's invention.

It is respectfully submitted that the combined teachings of the references applied by the Examiner fail to disclose or even suggest the subject matter of the claims at issue. That a prior art reference could be modified to form the claimed structure does not supply a suggestion to do so. "The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Laskowski*, 871 F.2d 115, 10 USPQ2d 1397 (Fed. Cir. 1989).

In view of these considerations, it is respectfully submitted that the rejection of the original claims should be considered as no longer tenable with respect to the new claims 2-8 and should be withdrawn. The new claims 2-8 should be considered as patentably distinguishing over the art and should be allowed.

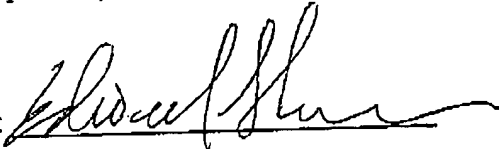
Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully asked that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. Alternatively should the Examiner feel that a

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personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned.

Respectfully submitted:

by:  on 7/15/2002

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